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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/580,656 | 05/25/2006 | Oliver Mamber | 1006/0146PUS1 | 5033 |
| 60601 7590 03/16/2011 Muncy, Geissler, Olds & Lowe, PLLC 4000 Legato Road Suite 310 FAIRFAX, VA 22033 | | | | |
| EXAMINER | | | | |
| LEO, LEONARD R | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 3785 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,656

Applicant(s)

MAMBER, OLIVER

Examiner

Leonard R. Leo

Art Unit

3785

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The finality of the Office action mailed on June 9, 2010 is withdrawn. Claims 1 and 5-10 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Inbe et al. Inbe et al (Prior Art) discloses a heat exchanger having a number of metal heat transfer surfaces (i.e. fins) with a hydrophilic coating on both sides thereof comprising nanoparticles of boron compounds dispersed in polyvinyl alcohol (column 10, lines 17-30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inbe et al in view of Troczynski et al.

Inbe et al (Prior Art and Summary of the Invention) discloses a heat exchanger having a number of aluminum heat transfer surfaces (i.e. fins) having a corrosion resistant layer after-treated with a hydrophilic layer comprising nanoparticles of boron compounds dispersed in

polyvinyl alcohol (column 10, lines 17-30) having a contact angle with water of about 20 to 28° (column 12, lines 27-385 and Table 2), but does not disclose the corrosion resistant layer comprising nanoparticles.

Troczynski et al (Example 5) discloses a heat exchanger having an aluminum alloy heat transfer surface with a corrosion resistant layer comprising nanoparticles (i.e. 0.5 μm) of aluminum compounds for the purpose of achieving a desired corrosion resistance.

Since Inbe et al and Troczynski et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Troczynski et al would have been recognized in the pertinent art of Inbe et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Inbe et al the corrosion resistant layer comprising nanoparticles of aluminum compounds for the purpose of achieving a desired corrosion resistance as recognized by Troczynski et al. Further, it would have been obvious to one of ordinary skill in the art to apply a known technique to a known device ready for improvement to yield predictable results. *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007).

Regarding claim 6, the specific layer thickness is considered to be an obvious design expedient, producing no new and/or unexpected results and solving no stated problem. One of ordinary skill in the art would employ any layer thickness to achieve a desired strength, longevity, effectiveness or heat transfer.

Regarding claims 7-10, the presence of a method limitation in an apparatus claim bears limited patentable weight in this instance. See MPEP 2113.

Response to Arguments

The rejections in view of Nakagawa et al, Jaffe et al and Kojima et al are withdrawn in light of applicant's arguments.

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

No further comments are deemed necessary at this time.

Conclusion

Applicant's amendment filed on February 23, 2010 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ Leonard R. Leo /
PRIMARY EXAMINER
ART UNIT 3785

March 14, 2011